UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

OIL STATES ENERGY SERVICES, LLC,	§	
	§	
Plaintiff,	§	
	§	
VS.	§	**CIVIL ACTION NO. 4:23-CV-0557**
	§	
WORLDWIDE OILFIELD MACHINE, INC.,	§	
	§	
Defendant.	§	
	§	

MEMORANDUM & ORDER

Before the Court are the claim construction briefs in this patent infringement suit. On February 23, 2024, the Court held a hearing, in accordance with *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), during which the parties presented arguments in support of their proposed constructions. After considering the arguments of counsel, the evidence, and the applicable law, the Court finds that the disputed claims of the patents-in-suit should be construed as set forth herein.

I. BACKGROUND

Plaintiff Oil States Energy Services, LLC ("Oil States") brought this case alleging infringement of U.S. Patent Nos. 10,969,023 (the "'023 Patent") and 11,028,929 (the "'929 Patent") (collectively, "Asserted Patents") against Defendant Worldwide Oilfield Machine, Inc. ("WOM").

A. Technological Background

The Asserted Patents relate to sealing technology for valves that are most commonly (but not exclusively) used in oil and gas production. Valves typically contain an interior bore through which fluid can pass, as well as a means of sealing the bore to stop the flow of fluid, as shown in the figure below. '023 Patent col. 1 l. 16–18, ECF No. 40-1. [1] The parties agree that the type of flow barrier used is irrelevant to the Asserted Patents and instant dispute.

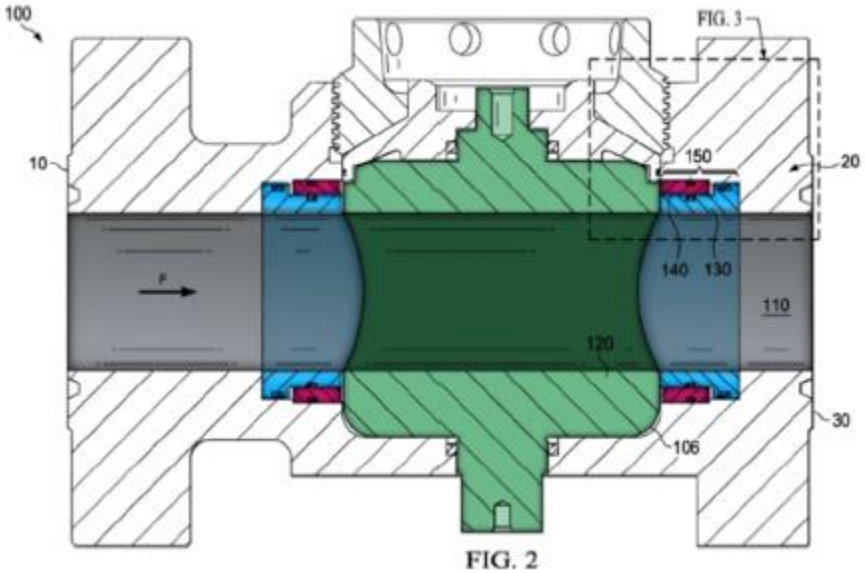


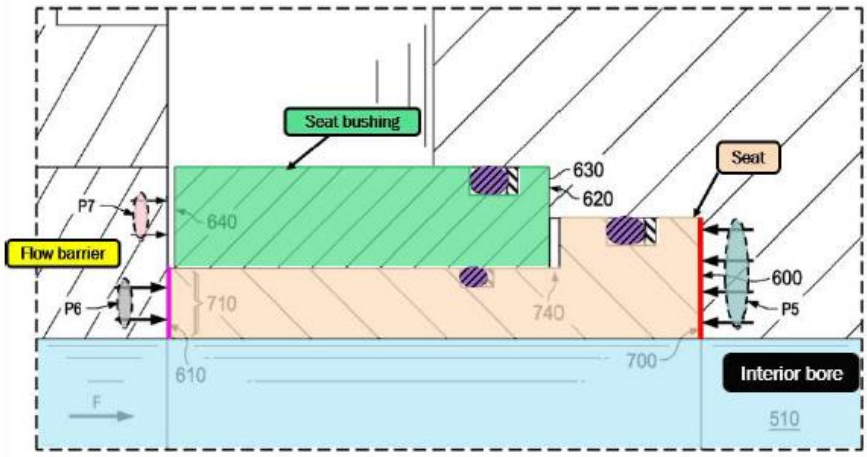
FIG. 2

Pl.'s Br. 6, ECF No. 48 (annotation of '023 Patent at fig. 2). Traditional valve designs only seal on one side of the valve—generally, the downstream side. '023 Patent col. 1 l. 61–67. Further, in traditional designs, the "seat" of the valve—that is, the part of the valve that exerts pressure against the bore to seal it—only contacts the plug when the valve is closed. *Id.* For instance, in the above figure, the sealing surface—where the blue and green parts of the figure

[1] The Asserted Patents share a common specification and figures, and differ only in claim language. Therefore, any citation to the specifications and figures of one patent is effectively a citation to both Asserted Patents.

meet—would typically not be engaged because the valve is open. Such designs are susceptible to various problems affecting the functionality and longevity of the valve. For example, chemicals and particulates can make their way into the gap between the sealing surface and the bore when the seal is not engaged (i.e., when the valve is open), which can degrade sealing surfaces and/or physically interfere with the formation of a seal. *Id.* at col. 1 l. 67–col. 2 l. 12. Further, traditional valves are typically made up of rubber or elastomer, which have an increased risk of degradation. *Id.* at col. 1 l. 51–60.

The Asserted Patents purport to solve these performance and longevity problems by utilizing asymmetric pressure acting on the radial surfaces of the seat such that the seat is maintained in sealing contact with the plug body regardless of whether the valve is in the open or closed position, *id.* at col. 2 l. 62–64, as demonstrated in the below figure.



Def.'s Resp. Br. 7, ECF No. 49 (annotation of '023 Patent fig. 8). The Asserted Patents' common specification explains that "[w]hen the valve is in the open condition, the fluid in the interior bore exerts pressure on both surface areas of the seat but, due to a differential in the two surface areas," that is, the pink surface area being smaller than the red surface area, "a net

positive force tends to urge the seat into sealing engagement with the flow barrier." '023 Patent col. 3 l. 4–8. And, when the valve is in the closed position, the force differential leads to a double seal. *Id.* at col. 3 l. 17–20. The constant double seal avoids the above-described problems caused by chemicals and particulates getting between the sealing surface and the flow barrier. Another advantage of the technology is that it allows for a metal-to-metal seal, rather than the more easily degraded but more common rubber or elastomeric seals. *Id.* at col. 2 l. 61–col. 3 l. 2, col. 3 l. 21–27.

II. APPICABLE LAW

A. Claim Construction

Claim construction is a matter of law, and the task of determining the proper construction of disputed terms therefore lies with the Court. *Markman*, 517 U.S. at 384. The goal of a *Markman* hearing is to arrive at the ordinary and customary meaning of claim terms in the eyes of a person of ordinary skill in the art ("POSITA"). *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc).

1. Ordinary Meaning

In some instances, this inquiry is quite straightforward. That is, where ordinary meaning is "readily apparent even to lay judges," district courts merely apply "the widely accepted meaning" of the terms, perhaps with the aid of "general purpose dictionaries." *Phillips*, 415 F.3d at 1313; *see also Mentor H/S, Inc. v. Med. Device Alliance, Inc.*, 244 F.3d 1365, 1380 (Fed. Cir. 2001) (finding no error in the lower court's refusal to construe "irrigating" and "frictional heat"); *Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (finding no error in non-construction of "melting"). Indeed, "[a] district court is not

obligated to construe terms with ordinary meanings, lest trial courts be inundated with requests to parse the meaning of every word in the asserted claims." *Shell Glob. Sols. (US) Inc. v. RMS Eng'g, Inc.*, 782 F. Supp. 2d 317, 334 (S.D. Tex. 2011) (Ellison, J.).

2. Intrinsic Evidence

In most cases, though, claim terms have a particular meaning in the field that may not be readily apparent. *See Phillips*, 415 F.3d at 1341. In such a scenario, courts look first to intrinsic evidence to decide if it clearly and unambiguously defines the disputed terms of the claim. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1585 (Fed. Cir. 1996). "Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language." *Id.* at 1582; *Personalized Media Commc'ns, LLC v. Apple Inc.*, 952 F.3d 1336, 1340 (Fed. Cir. 2020) ("When construing claim terms, we first look to, and primarily rely on, the intrinsic evidence . . . which is usually dispositive." (quoting *Sunovion Pharms., Inc. v. Teva Pharms. USA, Inc.*, 731 F.3d 1271, 1276 (Fed. Cir. 2013))). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314.

i. Claim Language

An examination of the intrinsic evidence begins with the claim language. *Immunex Corp. v. Sanofi-Aventis U.S. LLC*, 977 F.3d 1212, 1218 (Fed. Cir. 2020). The claims themselves can provide substantial guidance as to the meaning of terms. *Phillips*, 415 F.3d at 1314. The context in which a term is used in the asserted claim can be instructive, and "other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term." *Id.* Claim terms are most often used consistently throughout a patent,

and so the usage of a term in one claim can often illuminate the meaning of the same term in other claims. *Id.*

ii. Specification

Claims, however, do not stand alone and "must be read in view of the specification, of which they are a part." *Markman*, 52 F.3d at 979. The specification, which describes and illustrates the invention in detail, "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Vitronics*, 90 F.3d at 1582; *see also Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1478 (Fed. Cir. 1998) ("The best source for understanding a technical term is the specification from which it arose, informed, as needed, by the prosecution history.").

However, courts must be careful not to limit the construction of a claim based on limitations set forth in the specification that are not a part of the claim. *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998); *Phillips*, 415 F.3d at 1323 ("[A]lthough the specification often describes very specific embodiments of the invention, [the Federal Circuit has] repeatedly warned against confining the claims to those embodiments."); *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1373 (Fed. Cir. 2007) (noting that district courts walk a difficult "tightrope" in using the specification to interpret a claim's meaning, but not importing limitations from the specification into the claim). It is a general rule that "claims of a patent are not limited to the preferred embodiment . . . or to the examples listed within the patent specification." *Glaxo Wellcome, Inc. v. Andrx Pharms., Inc.*, 344 F.3d 1226, 1233 (Fed. Cir. 2003) (quoting *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1342 (Fed.Cir.2000)).

iii. Prosecution History

Courts may also consider the prosecution history, which provides evidence of how the Patent and Trademark Office (the "PTO") and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.*

Still, a "patentee may limit the meaning of a claim term by making a clear and unmistakable disavowal of scope during prosecution." *Purdue Pharma L.P. v. Endo Pharms., Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006); *see Cordis Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1329 (Fed. Cir. 2009); *cf. Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1349 (Fed. Cir. 2004) (limiting the term "transmitting" to require direct transmission over a telephone line because the patentee was found to have disclaimed transmission over a packet-switched network by stating during prosecution that the invention transmits over a standard telephone line); *Bell Atl. Network Servs. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1273 (Fed. Cir. 2001) (limiting operation of the "transceiver" to the three stated modes because of clearly limiting statements made by the patentee to try to overcome a prior art rejection); *cf. 3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013) ("Where an applicant's statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable."). Even where a patentee's statements in prosecution history do not amount to an unmistakable disavowal, they can inform the claim construction by, for example, explaining how the inventor understood the invention. *Personalized Media Commc'ns, LLC v. Apple Inc.*, 952 F.3d at 1340.

3. Extrinsic Evidence

In most circumstances, analysis of the intrinsic evidence alone will resolve claim construction disputes. *Vitronics*, 90 F.3d at 1583. However, if the intrinsic evidence does not resolve ambiguities, a court may also consider extrinsic evidence such as expert witness testimony, dictionary definitions, and legal treatises. *Id.* at 1585. While extrinsic evidence can shed useful light on the relevant art—and thus better allow a court to place itself in the shoes of a POSITA—the 'intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.'" *Vanderlande Indus. Nederland BV v. I.T.C.*, 366 F.3d 1311, 1318 (Fed. Cir. 2004) (quoting *Vitronics*, 90 F.3d at 1582).

B. Indefiniteness

A claim is invalid under 35 U.S.C. § 112(2) (2006 ed.) if it fails to "particularly point out and distinctly claim the subject matter that the applicant regards as the invention." The Federal Circuit has explained:

> The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, e.g., competitors of the patent owner, can determine whether or not they infringe. That determination requires a construction of the claims according to the familiar canons of claim construction.

Oakley, Inc. v. Sunglass Hut Int'l, 316 F.3d 1331, 1340 (Fed. Cir. 2003) (citing *All Dental Prodx, LLC v. Advantage Dental Prods.*, 309 F.3d 774, 779–80 (Fed. Cir. 2002)). The Supreme Court has interpreted § 112(2) to mean that "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). The alleged infringer carries the burden of

proving invalidity "by clear and convincing evidence." *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1376 (Fed. Cir. 2009).

Assessing indefiniteness allegations "entails a delicate balance." *Nautilus*, 134 S. Ct. at 2128 (quotation omitted). "On one hand, the definiteness requirement must take into account the inherent limitations of language." *Id.* "At the same time, a patent must be precise enough to afford clear notice of what is claimed." *Id.* at 2129; *see also Dow Chem. Co. v. Nova Chems. Corp. (Canada)*, 803 F.3d 620, 630 (Fed. Cir. 2015) ("Nautilus emphasizes 'the definiteness requirement's public-notice function.'").

III. CONSTRUCTION OF DISPUTED TERMS

A. "surface"

As the Court held in the *Markman* hearing, and for reasons stated on the record, the Court concludes that no construction is necessary as this claim term carries its plain and ordinary meaning.

B. "radial surface" and "axial surface"

Term	Patent/Claims	Plaintiff's Construction	Defendant's Construction	Court's Construction
"radial surface"	'023 Patent cl. 1, 8, 12, 17 '929 Patent cl. 1, 8, 12, 17	Plain and ordinary meaning / no construction necessary	"A surface that is perpendicular to the central longitudinal axis of the bore at a single point"	"a surface that is arranged in a direction perpendicular to the central longitudinal axis of the bore (but not necessarily perfectly perpendicular to the axis)."
"axial surface"	'023 Patent cl. 1, 17	Plain and ordinary meaning / no	"A surface that is parallel to the central	"a surface that is arranged in a direction parallel to

	'929 Patent cl. 17	construction necessary	longitudinal axis of the bore"	the central longitudinal axis of the bore (but not necessarily perfectly parallel to the axis)."

Plaintiff argues that the use of the terms "axial" and "radial" are "easily understood in the context of the claim language." Pl.'s Br. 16. The claims use the terms "axial surface" and "radial surface" to describe physical surfaces of the seat and seat bushing, and to define certain relationships between them that are important to the functionality of the patented technology. For instance, the '023 Patent describes:

> [A] seat disposed within [an annular recess formed in the valve body] adjacent to the interior bore and comprising a **first radial surface** adjacent to said flow barrier and a **second radial surface**, the **second radial surface** being larger than the **first radial surface**, and a **first axial surface** at a first axial distance from the central longitudinal axis of the bore. . . . the seat further comprises: a **second axial surface** adjacent to the first axial surface of the seat bushing.

'023 Patent cl. 1, 17 (emphasis added). The '929 Patent uses slightly different language, but employs "radial surface" and "axial surface" in a similar manner. The Asserted Patents also differentiate between surfaces by referring to numerical labels in figures. *See, e.g.*, '023 Patent col. 5 l. 5–15 ("[s]urface 200 is adjacent to valve body 200 at interface 300 . . . surface 200 is larger than surface 210."). The Asserted Patents' figures depict these surfaces as follows, with radial surfaces labeled in red and axial surfaces labeled in green:

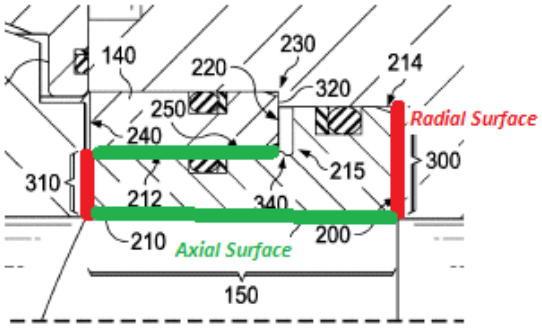


FIG. 3

'023 Patent fig. 3 (annotated). Plaintiff submits that a POSITA would understand that an "axial surface" is one arranged in the direction of the valve's central longitudinal axis (in the figures, horizontally), and that a "radial surface" is one arranged in the direction of rays extending from the central longitudinal axis (in the figures, vertically). Defendant argues that specifying that the surfaces are perpendicular or parallel to the central longitudinal bore would help with jury understanding. As an initial matter, and as stated on the record, the Court concludes that "radial surface" and "axial surface" do not have a readily apparent meaning. *See Phillips*, 415 F.3d at 1341. Construction is therefore appropriate. *Id.*

In the *Markman* hearing, the parties appeared to be more closely aligned on the construction of these terms than their briefing initially suggested. Parties share an understanding of how radial surfaces and axial surfaces are positioned with reference to the central longitudinal axis of the bore. They disagree solely over whether the Court should construe the term such that the surfaces must be *perfectly* parallel or perpendicular to the axis, or, conversely, only *generally* parallel or perpendicular. Plaintiff objects to the exactness of Defendant's proposed construction. In the hearing, Defendant conceded that its insistence on the perfectly parallel/perpendicular construction stemmed from concerns about jury confusion regarding *how* close to parallel or

perpendicular the respective surfaces must be for a finding of infringement. As a technical matter, parties agreed that the *exact* angle at which the surfaces are positioned relative to the axis is not essential. Apart from concerns about jury confusion, Defendants expressed that they would take no issue with a construction of "radial surface" that would encompass a surface that meets the axis at an 88 degree angle, rather than at a 90 degree angle.

In order to harmonize these concerns and provide sufficient clarity for the jury, the Court construes "radial surface" as "a surface that is arranged in a direction perpendicular to the central longitudinal axis of the bore (but not necessarily perfectly perpendicular to the axis)." Similarly, the Court construes "axial surface" as "a surface that is arranged in a direction parallel to the central longitudinal axis of the bore (but not necessarily perfectly parallel to the axis)."

C. "seat bushing"

Term	**Patent/Claims**	**Plaintiff's Construction**	**Defendant's Construction**	**Court's Construction**
"seat bushing"	'023 Patent cl. 1, 8, 17 '929 Patent cl. 1, 8, 17	"a component that guides or supports the seat"	"Rigid, cylindrical lining that guides and bears the load between the seat and the valve body"	"a component that guides and supports the seat"

The parties agree that "seat bushing" requires construction, as it is not a term that has a plain and ordinary meaning that could be understood by a layperson. The parties further agree that a seat bushing "guides or supports the seat" to some extent. Defendant submits, however, that the Court's construction should include the following limitations: (1) rigid, (2) cylindrical, and (3) able to bear a load.

1. Defendant's proposed construction

i. "rigid"

WOM argues that "the context of the invention" and "materials identified by the specification" lead to the conclusion that a POSITA would understand the seat bushing to necessarily be "rigid." Def.'s Resp. Br. 19.

The seat bushing's general function is to guide and support the seat to maintain sealing contact with the flow barrier. This functionality is confirmed in the Asserted Patents' common specification and figures. *See, e.g.*, '023 Patent col. 2 l. 61–64. WOM argues that, in order for the seat bushing to perform its function, it must be "rigid." WOM's expert explains that, if a seat bushing were not made of rigid material, it would "deform as force is applied to it, thereby causing the bushing to fail at guiding and supporting the neighboring components." Decl. of Vinod Sharma, Ex. E to Def.'s Resp. Br ¶ 71, ECF No. 49-5 (Sharma Decl.).

However, the claim language and specification do not support this conclusion. First, the Federal Circuit has emphasized that courts should not limit the construction of a claim based on preferred embodiments set forth in the specification. *See, e.g.*, *Phillips*, 415 F.3d at 1323. In this case, the specification notes that the seat and seat bushing "are formed from stainless steel or another metal, rather than the rubber or elastomeric seals generally found in prior art plug valves" in "an *exemplary embodiment*." '023 Patent col. 3 l. 21–24 (emphasis added). Thus, the Court cannot limit the construction of "seat bushing" based upon this language in the specification alone.

Second, there is language in the specification stating that the seat and seat bushing "*may* be formed of metal, such as stainless steel." *Id.* at col. 4 l. 65–66 (emphasis added); *see also* Ex. F to Def.'s Resp. Br., Dep. of Dr. Gary R. Wooley, 94:4–6, ECF No. 49-6 (Wooley Dep.) (noting

that he would "expect" the seat bushing to be made of rigid metal). Claim 12 of both Asserted Patents clarifies that the *seat* is comprised of metal, but no parallel claim states that the *seat bushing* must be made of metal. '023 Patent cl. 12; '929 Patent cl. 12. The natural conclusion is that the seat bushing may be made of non-rigid rubber or elastomeric material, even though such material is perhaps not preferred. *See Phillips*, 415 F.3d at 1314 (explaining that "other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term"). All in all, the claim language and specification indicate that the construction of "seat bushing" should not include the limiting requirement that the component be "rigid."

Furthermore, Mr. Sharma's deposition testimony indicates that WOM's construction would render the claim indefinite. The Federal Circuit has stated that, if "a proposed construction requires that an artisan make a separate infringement determination for every set of circumstances in which the composition may be used . . . that construction is likely to be indefinite." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008). When asked to define "rigid" in the context of the Asserted Patents, Mr. Sharma was unable to precisely provide a definition, explaining that whether a material is rigid "depends on the context and the application" as well as the valve. *See* Dep. of Vinod Sharma, Ex. H to Pl.'s Br. 45:16–46:7, ECF No. 48-8 (Sharma Dep.). Even though Mr. Sharma understood the specification to require the seat bushing to be made of metal, he testified that assessing whether metal is "rigid" depends on the context. *Id.* at 48:22–53:7. He explained that he could not determine for sure whether any type of metal was "rigid" without knowing the "design envelope" and pressure, amongst other factors. *Id.* Mr. Sharma's testimony is not surprising; nearly every material is rigid under some circumstances (for instance,

at low pressures) and not rigid under others. *See Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1329 (Fed. Cir. 2006) (opining that "rigid" is a "very relative term" and that "even a pressurized rubber balloon could in some cases be 'rigid'"). Accordingly, Defendant's proposed "rigid" construction would result in "a separate infringement determination for every set of circumstances in which the composition may be used" and is, therefore, likely indefinite. *See Halliburton,* 514 F.3d at 1255. The Court declines to use the term "rigid" in its construction of "seat bushing."

ii. Cylindrical

In support of its proposed "cylindrical" limitation on this term's construction, WOM points to the specification language stating that the seat and seat bushing "are generally annular in shape" '023 Patent col. 4 l. 63–66. WOM urges the Court to use the synonymous term "cylindrical" rather than "annular" because it would be more clearly understood by a jury. But WOM also notes that it would be amenable to the Court using the word "annular." Def.'s Br. 19 n.5. Plaintiff disagrees, maintaining that these terms are not synonymous, as an "annular" object is "ring-shaped" and "would not be understood to [consist of] a component that is uninterrupted around the entire circumference, i.e., cylindrical." Decl. of Dr. Gary R. Wooley, Ex. E to Pl.'s Br. ¶ 16, ECF No. 40-5 (Wooley Decl.).

WOM also points out that because the Asserted Patents do not define "seat bushing," it is appropriate to consult scientific dictionaries and technical treatises. *See Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1373 (Fed. Cir. 2001) ("[I]n determining the ordinary meaning of a technical term, courts are free to consult scientific dictionaries and technical treatises at any time."). One dictionary defines "bushing" as "[a] fixed or removable *cylindrical* metal lining

used to constrain, guide, or reduce friction." American Heritage Dictionary of the English Language (5th ed. 2018), Ex. C to Pl.'s Br, ECF No. 48-3 (emphasis added).

Ultimately, the internal evidence does not support WOM's proposed "cylindrical" limitation. The specification describes the seat and seat bushing as "generally annular." '023 Patent col. 4 l. 63–66. The Court does not read this to *require* that the seat and seat bushing are annular in shape. The dictionary definition of "bushing" does not overcome the specification's permissive language. *See Vitronics*, 90 F.3d at 1582 (explaining that the specification is "the single best guide to the meaning of a disputed term"); *Multiform Desiccants*, 133 F.3d at 1478 (describing the specification as "[t]he best source for understanding a technical term"). Further, the Court is convinced by Dr. Wooley's testimony and Oil States' arguments in the *Markman* hearing that "annular" and "cylindrical" are not synonymous.

Separately, the Court is not persuaded by WOM's argument that the Asserted Patents require a cylindrical seat bushing because Oil States' expert confirmed that every embodiment in the Asserted Patents is cylindrical. *See* Wooley Dep. 94:8–20. The Federal Circuit has stated that "[i]t is . . . not enough that the only embodiments, or all of the embodiments, contain a particular limitation. We do not read limitations from the specification into claims . . . ." *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012); *see also Dow Chem. Co.*, 226 F.3d at 1342 (noting "general rule" that "claims of a patent are not limited to the preferred embodiment . . . or to the examples listed within the patent specification"). Therefore, even if Dr. Wooley is correct that all of the embodiments in the Asserted Patents contemplate a cylindrically-shaped seat bushing, that would not be enough to support the "cylindrical" limitation on the construction of "seat bushing." The Court rejects WOM's proposed "cylindrical" or "annular" limitation.

iii. "bears the load between the seat and the valve body"

WOM points to a lack of clarity in the intrinsic evidence, and urges the Court to consider its expert's testimony that bushings "support and/or guide[] neighboring parts while bearing the load that is transferred through them." Sharma Decl. at ¶ 70. Plaintiff argues that WOM's construction introduces ambiguity, as it has not defined what it means to "bear" an unspecified "load." Oil States observes that WOM's limitation could not be assessed with respect to any potential "seat bushing" without knowing both the surface area of the bushing and the amount of pressure being exerted on the seat. Pl. Br. at 25. In any event, Plaintiff points out that claim scope is properly narrowed in "only two instances: lexicography and disavowal," neither of which is present here. *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014).

The Court agrees with Plaintiff that the intrinsic record does not support the limiting of this term in the manner WOM proposes. Additionally, the Court is not entirely convinced that WOM's characterization is correct—that is, it seems misleading to state the seat bushing "bears the load between the seat and the valve body." This construction implies that the seat bushing bears the entire load between the seat and the valve body. But the seat itself bears part of the load; the seat bushing merely supports the seat such that the surface abutting the valve body does not bear the entirety of the force exerted by the valve body. Therefore, the Court declines WOM's invitation to limit its construction in this manner.

2. Plaintiff's proposed construction

Plaintiff urges the Court to construe "seat bushing" as "a component that guides or supports the seat." WOM submits that this construction introduces ambiguity. That is, Oil States' construction does not resolve the issues of whether a seat bushing could *only* guide, or *only* support

the seat, or, on the other hand, how much "guiding" or "supporting" is enough to fall within the proposed construction. Plaintiff addressed these concerns in the *Markman* hearing by confirming that it would accept the construction "a component that guides **and** supports the seat" to eliminate potential ambiguity.

3. The Court's construction

The Court is convinced that Plaintiff's amended proposed construction best reflects the intrinsic evidence and mitigates potential juror confusion. Therefore, the Court construes "seat bushing" as "a component that guides and supports the seat."

D. "chamber"

As the Court held in the *Markman* hearing, and for reasons stated on the record, the Court concludes that no construction is necessary as this claim term carries its plain and ordinary meaning.

E. Allegedly indefinite terms (terms 6, 7, and 8)

WOM argues that terms 6, 7, and 8 are indefinite. OSES disagrees, contending that no construction is necessary. Parties' arguments regarding these terms raise similar issues which are best addressed simultaneously.

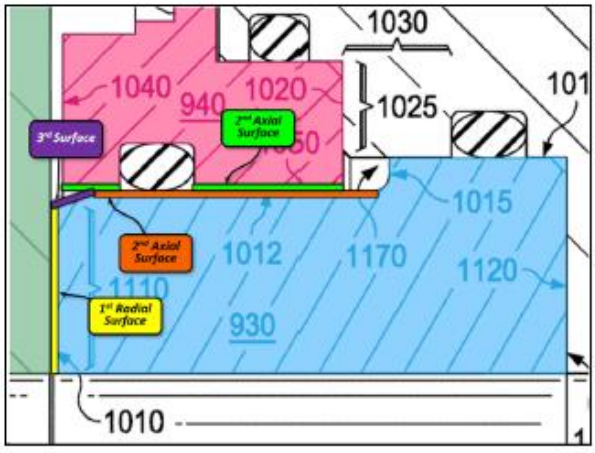
Term	**Patent/Claims**	**Plaintiff's Construction**	**Defendant's Construction**	**Court's Construction**
"a third surface that intersects both the first radial surface and the second axial surface"	'023 Patent cl. 17	Plain and ordinary meaning / no construction necessary	*Indefinite*	Plain and ordinary meaning / no construction necessary *(not indefinite)*
"fourth surface" [of the seat]	'929 Patent cl. 17	Plain and ordinary meaning / no construction necessary	*Indefinite*	*Indefinite*

"a fourth surface that intersects both the first radial surface and the second axial surface"	'929 Patent cl. 17	Plain and ordinary meaning / no construction necessary	*Indefinite*	*Indefinite*

1. "a third surface that intersects both the first radial surface and the second axial surface"

Parties dispute the construction of the '023 Patent's description of a "third surface," which is set forth in claim 17 as follows: "the seat further comprises: a second axial surface adjacent to the first axial surface of the seat bushing; and **a third surface that intersects both the first radial surface and the second axial surface**." '023 Patent cl. 17 (emphasis added). The '023 Patent defines "first axial surface" of the seat to be "at a first axial distance from the central longitudinal axis of the interior bore." *Id.* at cl. 1. It does not define "first axial surface of the seat bushing." However, a POSITA could reasonably identify the first axial surface of the seat bushing as set out in claim 17, as there is only one axial surface of the seat bushing that is adjacent to the seat.

Plaintiff argues that this term is not indefinite because a POSITA could reasonably identify that it refers to the surface identified as "3rd Surface" in the below figure:



Pl.'s Br. at 30 (annotated '023 Patent fig. 11). But the fact that the patent holder can articulate a definition supported by the specification does not end the indefiniteness inquiry. *Halliburton*, 514 F.3d at 1251. In such a situation, a claim term is still indefinite if it might carry several meanings and no informed and confident choice is available among the contending meanings. *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) (citation omitted).

Nevertheless, the Court agrees with Plaintiff that a POSITA could identify the above-labeled surface as claim 17's "third surface" with reasonable certainty. The claim language naturally describes the "third surface" using the following numbering methodology:

> the seat bushing further comprises a **first axial surface** [first surface]; and the seat further comprises: a **second axial surface** [second surface] adjacent to the **first axial surface of the seat bushing** [another reference to the first surface]; and a **third surface** that intersects both the **first radial surface** [a fourth surface] and the **second axial surface** [another reference to the second surface].

'023 Pat. cl. 17. Plaintiff's position finds further support in the specification. Specifically, figure four of the common specification labels what Plaintiff considers the "third surface" as surface 216 and explains that pressure may be exerted on the surface. '023 Patent col. 6 l. 5–9.

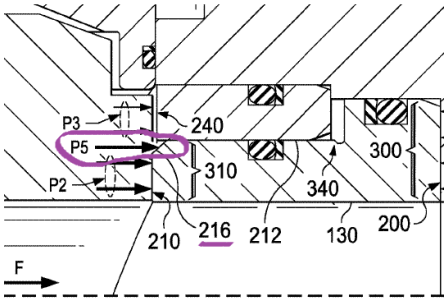


FIG. 4

Id. at fig. 4 (annotated). Taking the claim language and specification together, the Court finds and holds that a POSITA could identify the "third surface that intersects both the first radial surface and the second axial surface" with reasonable certainty. The Court therefore concludes that this term is not indefinite, and that no construction is necessary, as this claim term carries its plain and ordinary meaning.

2. "fourth surface" [of the seat] and "a fourth surface that intersects both the first radial surface and the second axial surface"

Parties dispute the construction of the '929 Patent's description of a "fourth surface," which is set forth in claim 17 as follows: "the seat further comprises: a second axial surface adjacent to the first axial surface of the seat bushing; and **a fourth surface that intersects both the first radial surface and the second axial surface**." '929 Patent cl. 17 (emphasis added).

Claim 17 of the '929 Patent is identical to claim 17 of the '023 Patent, but it refers to a "fourth surface" as opposed to a "third surface." Defendants argue that this difference is significant. Plaintiff's claim construction briefing does not address the fact that the '929 Patent refers to a "fourth surface" without first mentioning a third surface. It only states that the issues in both Asserted Patents are "nearly identical." Pl.'s Br. 29. In the *Markman* hearing, Oil States

argued that the "fourth surface" was the same as the '023 Patent's "third surface." It arrived at "fourth surface" using the following numbering methodology:

> "the seat bushing further promises a **first axial surface** [first surface]; and the seat further comprises: a **second axial surface** [second surface] adjacent to the **first axial surface of the seat bushing** [another reference to first surface]; and a **fourth surface** that intersects both the **first radial surface** [third surface] and the **second axial surface** [another reference to second surface]."

'929 Patent cl. 17. That is, Oil States submits that the claim lists surfaces in the order of first, second, fourth, third. This proposal contravenes basic logic. The claim language must identify a third surface before labeling a fourth surface. *Cf. CA, Inc. v. Netflix, Inc.*, No. 221CV00080, 2021 WL 5323413 (E.D. Tex. Nov. 16, 2021) (concluding that "third system" claim language was indefinite because the claim had not referred to a "second system"); *see also Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1367 (Fed. Cir. 2016) (explaining that claims that are "nonsensical" are indefinite).

Moreover, Oil States' arguments for why the '023 Patent's "third surface" claim is not indefinite undermine its "fourth surface" arguments here. The '023 and '929 Patents share a common specification. The language of claim 17 in both patents is identical, except that the '929 Patent refers to a "fourth surface" rather than a "third surface." The Court's determination that the "third surface" term is not indefinite naturally leads to the conclusion that the "fourth surface" terms *are* indefinite—one surface cannot be reasonably understood to be both a third and fourth surface where all else is equal.

All in all, the Court finds and holds that a POSITA would be unable to identify a "fourth surface" or "fourth surface that intersects both the first radial surface and the second axial surface" with reasonable certainty. The Court concludes that these terms are indefinite.

IV. CONCLUSION

The disputed terms in the patents-in-suit are construed as set forth in this Order.

IT IS SO ORDERED.

SIGNED at Houston, Texas on this the 27th day of February, 2024.

KEITH P. ELLISON
UNITED STATES DISTRICT JUDGE